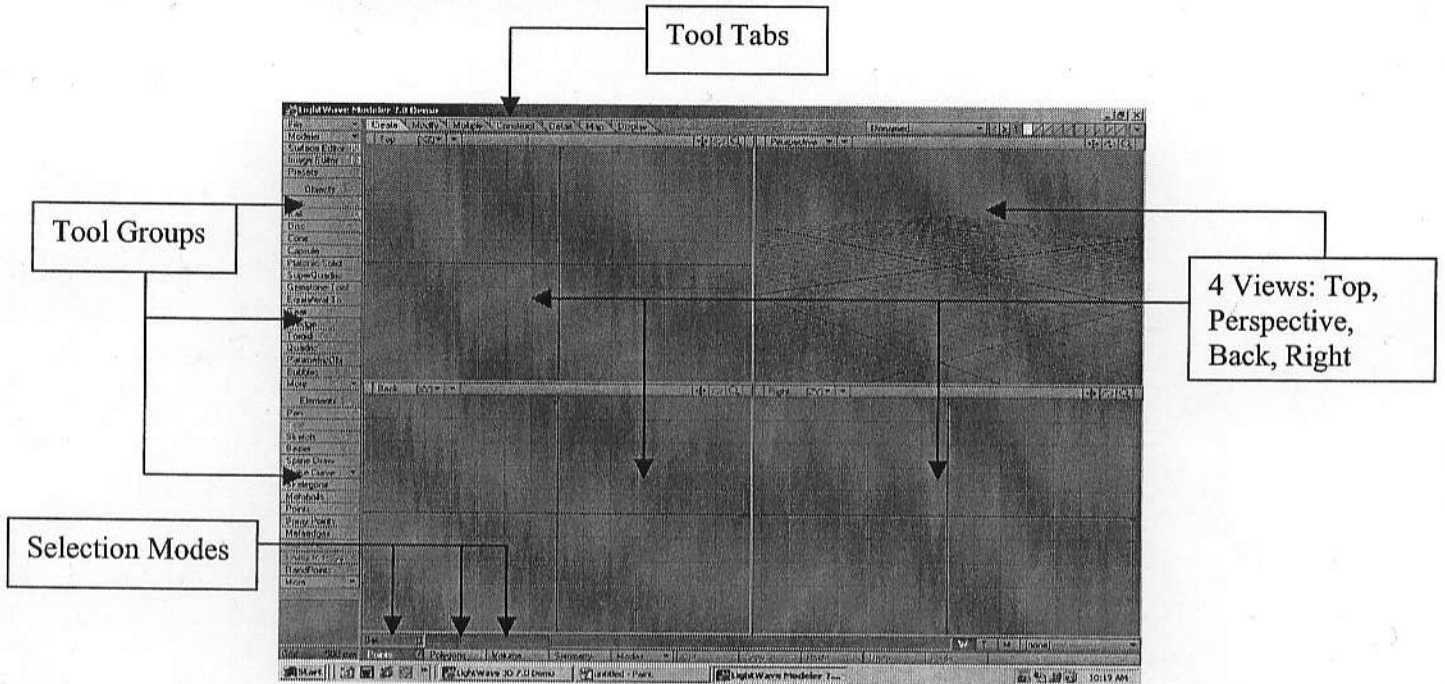# LightWave 3D Flying Dragon - Modeling

## *The User Interface*

Start LightWave Modeler – click on *LightWave Desktop Icon* on the desktop OR
Click on *Start/Programs/LightWave/Modeler*

Tool Tabs



Tool Groups

4 Views: Top,
Perspective,
Back, Right

Selection Modes

You will notice that you have four views, tabs across the top of the interface, and different s object selection modes at the bottom left area of the screen.



View Type

View Render Type
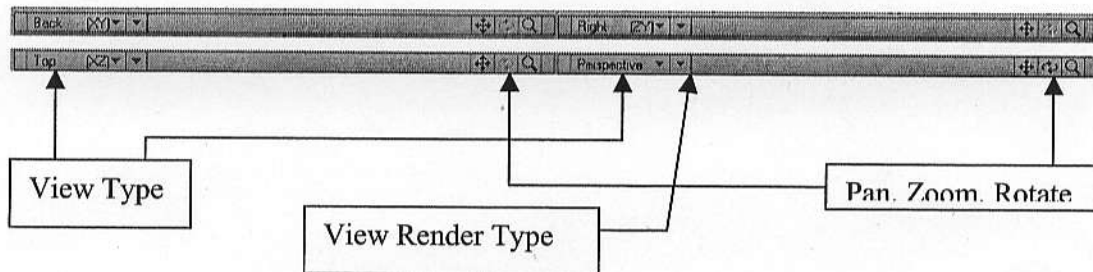
Pan, Zoom, Rotate

As well, you will notice at the top right area of each view are your pan, zoom, and rotate (Perspective view only) view buttons. All you need do is put your cursor over any of these buttons and left mouse (LMB) click & drag to perform the action. On the left area of each view are your options to change the view to another type; **Front, Left, Bottom, UV Texture, none** (disables the view) Also, if you LMB click & hold you can set the view render to **Wireframe, Sketch, Smooth Shade, Wireframe Shade**, and so on.

# _Creating Objects_

1) In the **Perspective View**, set the View Render Type to **Wireframe Shade**.

| Color Wireframe |
| Sketch |
| Wireframe Shade |
| Flat Shade |
| Smooth Shade |
| Weight Shade |
| Texture |

Perspective
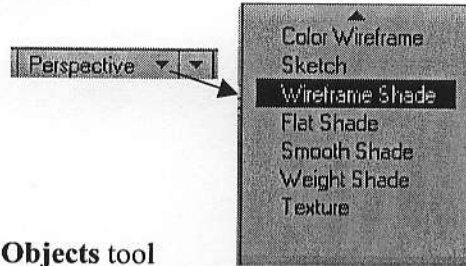
2) From the top tabs select the **Items** tab, under the **Objects** tool group along the left side menu, select the **Box** tool.

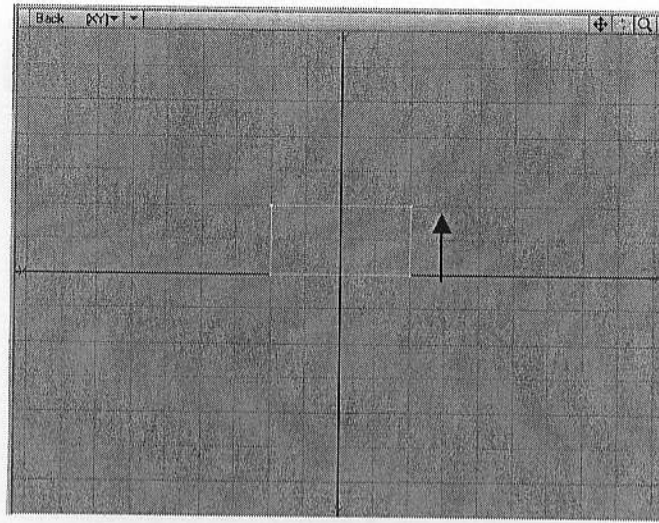| Objects | |
|---|---|
| Box | ✕ |
| Ball | ○ |
| Disc | |
| Cone | |
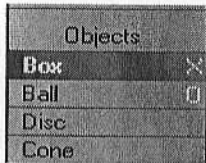
3) Starting in the **Top** view, left mouse button (LMB) click and drag to create a box that is 4 grid units by 4 grid units.

**Start Here**

Top
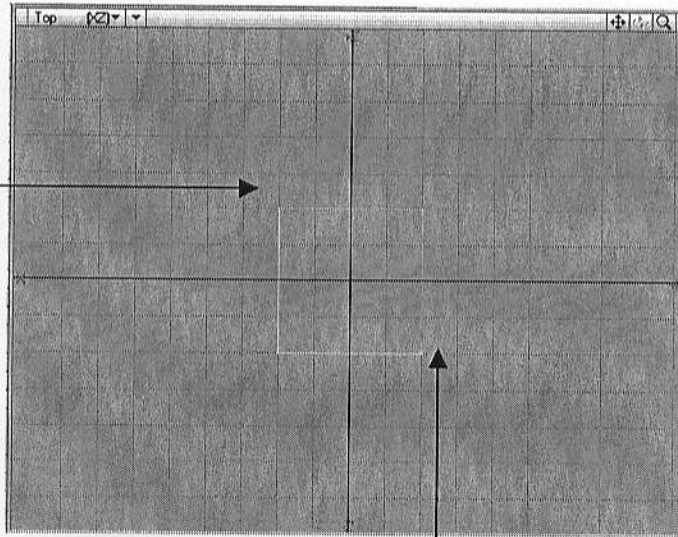
**End Here**

4) Continuing with the **Box** tool, extrude the box up 2 units in the **Back** view.



5) Press the **spacebar** on the keyboard to deactivate the **Box** tool.

# *Smoothing Objects*

To smooth the box, make sure you are in **Polygon** selection mode at the bottom –left area of the interface, click in the empty area just under the **tool groupings** to make sure no polygon face are selected, then hit the tab key on the keyboard. Also rotate your **Perspective** view to look like the following diagram:

NOTE: every LightWave 3D object consists of Points and Polygons (also known as faces)

Modeling is a combination of pulling and pushing Points on an object, as well as extruding, beveling and scaling polygon faces on objects.
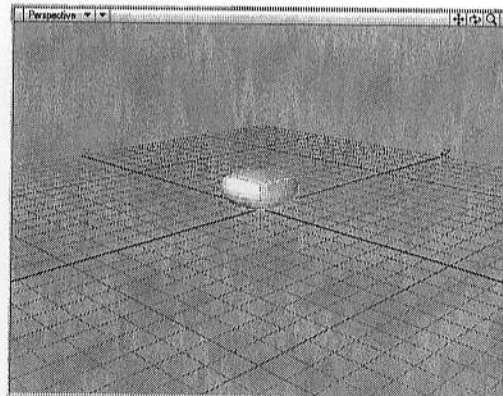
# *Using Symmetry*

When modeling objects in LightWave Modeler, we can use the **Symmetry** tool so that what we do to one side of this box will automatically reflect on the other side. This is extremely powerful and will speed up our workflow.

Still in **Polygon** selection mode, LMB-click to activate the **Symmetry** tool located at the bottom area of the interface near the **Polygon** button.
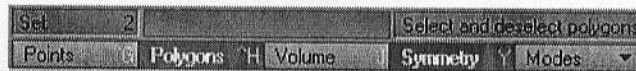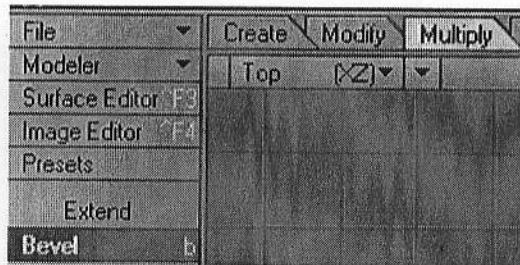
# *Beveling Faces*

1) In the **Perspective** view, LMB-click to select the face on the right side of the box. You should see both faces on the left and right side of the box highlight in yellow in the **Top** view. This tells us that the faces are selected.
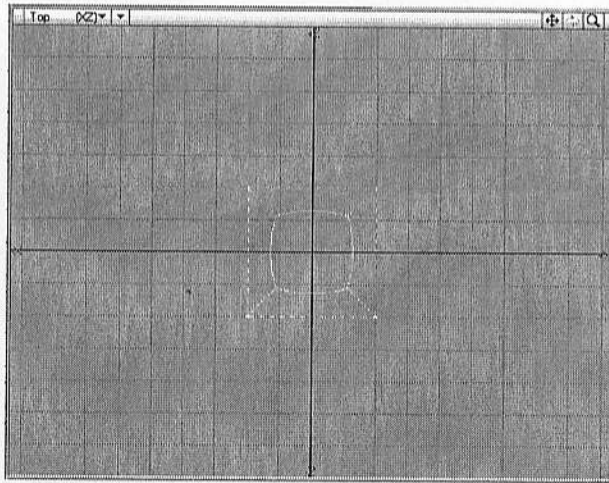
2) In the top area of the interface, select the **Multiply** tab. In the **Extend** tool group, select the **Bevel** tool.

3) Place your mouse in the center on the **Top** view. LMB-Click and drag up
   approximately 3-4 grid units, then LMB click-drag to the left approximately 1-2
   grid units. Use the following diagram as a reference.
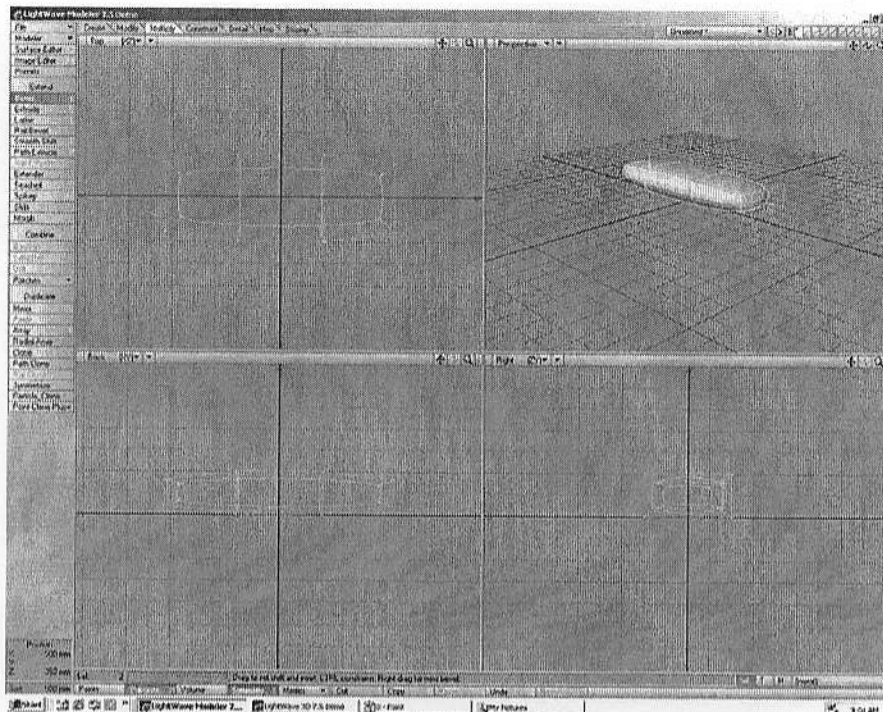


4) Right-click to start another **Bevel** operation. LMB click-drag upward and
   slightly to the left in the **Top** view. Make sure that the faces don't cross over each
   other in the **Back** and **Right** views. Use the following diagram as a reference
   guide.



Copyright © 2002 by iDESIGN Solutions Inc
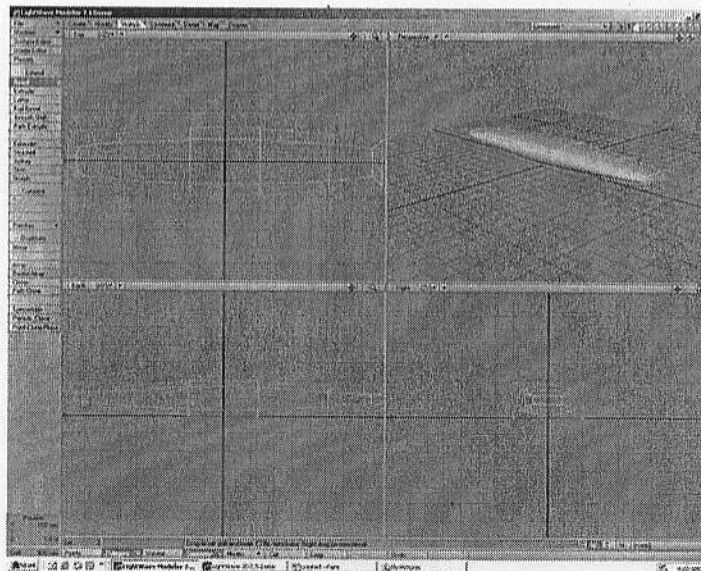
5) Finally, Right-click to start another **Bevel** operation. Using the LMB click-drag upward and slightly to the left in the **Top** view technique, finish off this last **Bevel**. Press the **spacebar** on the keyboard to deactivate the **Bevel** tool.
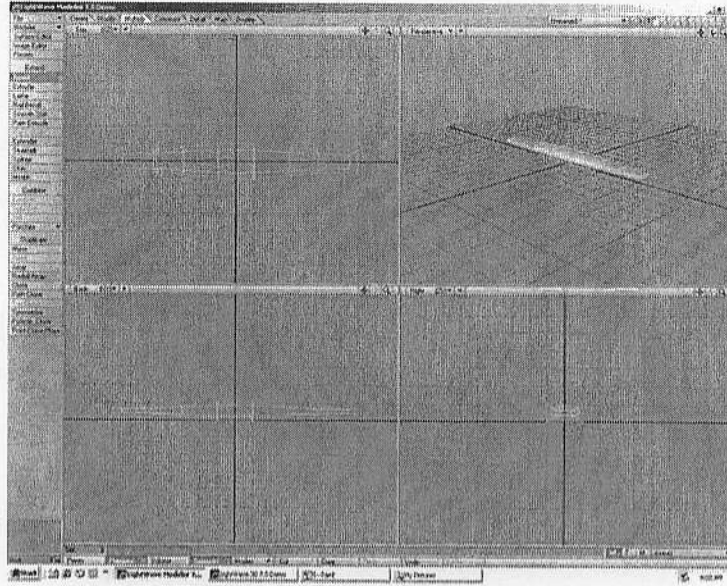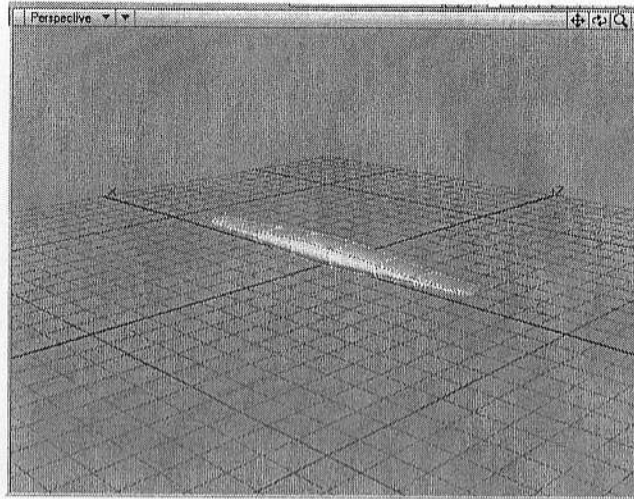


6) Click in the empty area underneath the **tool groups** to deselect all **Polygon** faces.

**Click Here**
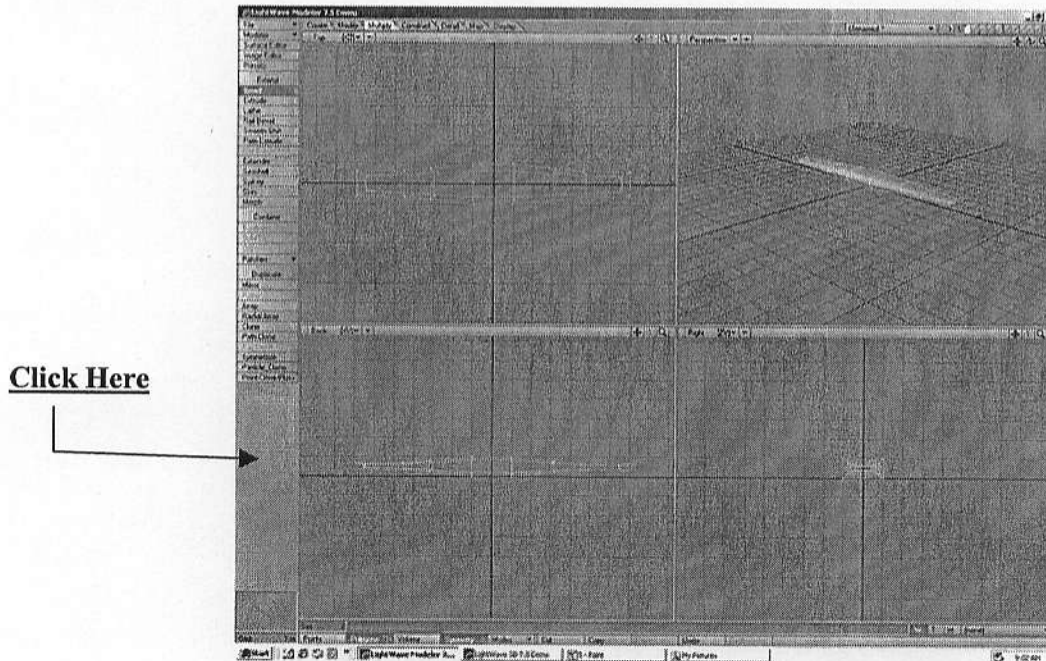
# _Modifying Objects_

1) In the **Perspective** view, **Rotate** the view so we are looking at the positive Z axis (this will angle the view so we are looking at the back of the soon-to-be dragon)



2) Select the back center face in the **Perspective** view.



Make sure you have the **Multiply** tab selected, under the **Extend** tool group, select the **Bevel** tool.

3) Place your mouse at the center of the **Top** view and LMB click-drag up 4-5 units, then approximately 1-2 units to the left.

4) Right-click to start another **Bevel** operation. In the **Top** view, LMB click-drag up approximately 3-4 grid units and approximately 1-2 grid units to the left. Press the **spacebar** on the keyboard to deactivate the **Bevel** tool. Click in the empty area under the **tool groupings** to deselect all **Polygon** faces.
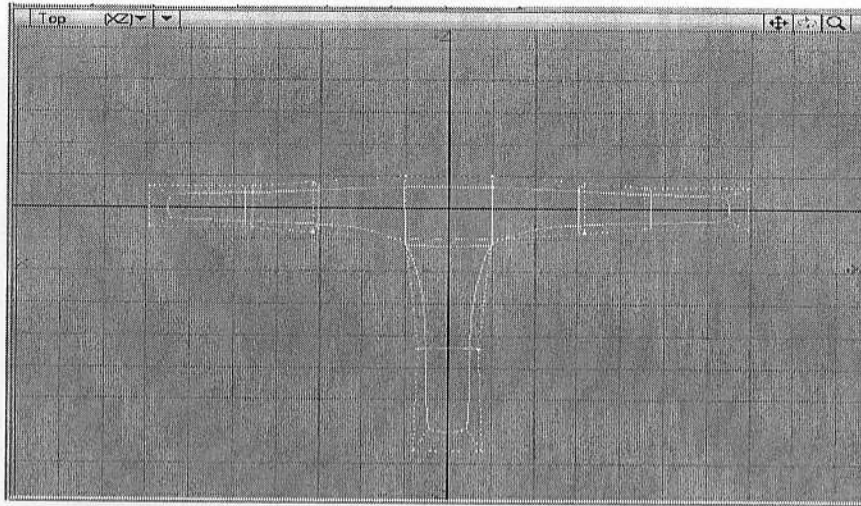


5) Go to **Point** selection mode and then click in the empty area under the **tool groupings** to ensure that no points are currently selected.



6) Right mouse button (RMB) click-drag to marquee select the following point on the dragon in the **Top** view. Notice how the opposing points on the left side of the model highlight. That's because of the **Symmetry** tool is active.
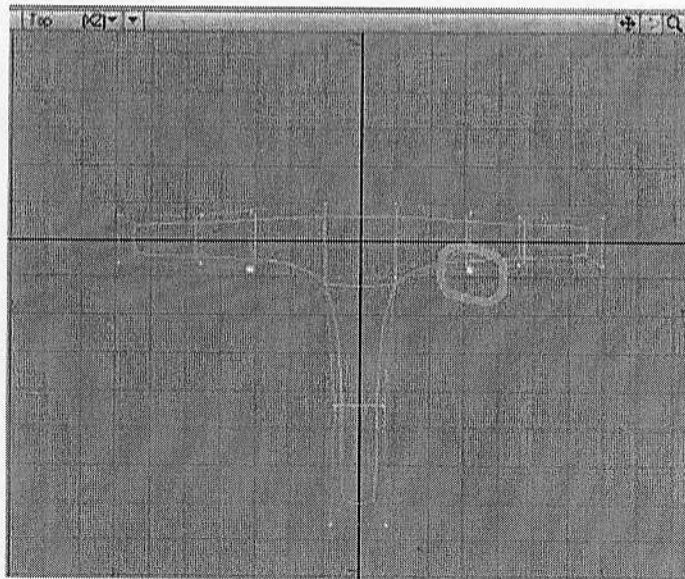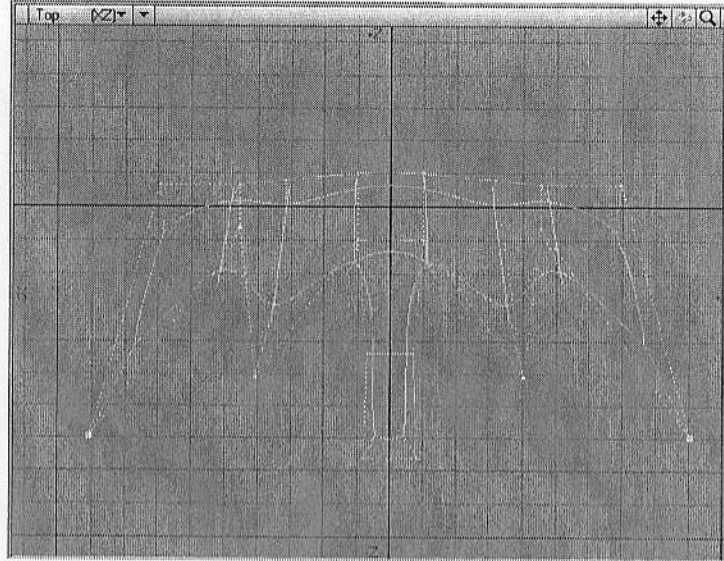
7) In the top area of the interface, select the **Modify** tab, the in the left side menu select the **Move** tool.

8) In the **Top** view, place your mouse over the selected point on the right side of the model and LMB click-drag downward 4 grid units and 1 grid unit to the right.
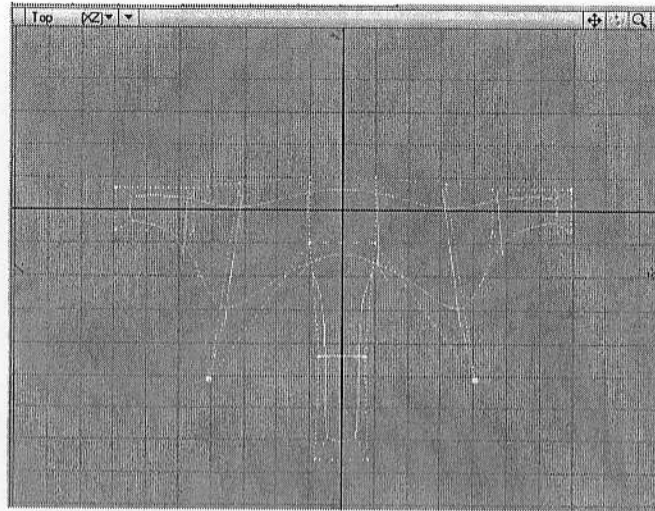


9) Press the spacebar to deactivate the **Move** tool.

10) LMB click in the empty area under the **tool groupings** to deselect the current point selection.
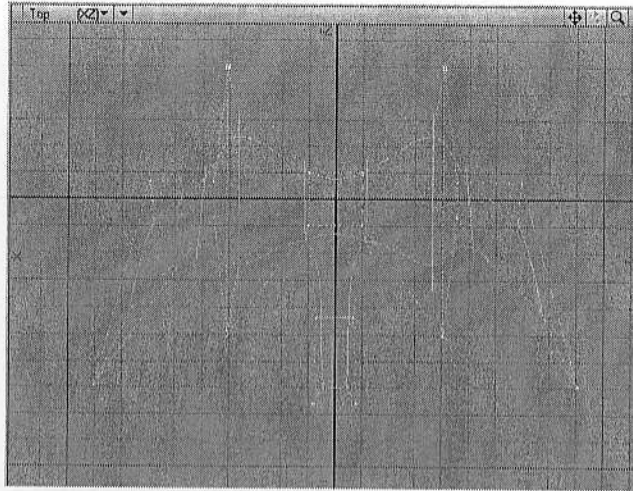
11) RMB click-drag to marquee select the following points.

12) Select the **Modify** tab at the top of the interface, under the **Move** group, select the **Move** tool.

13) In the **Top** view, place your mouse over the selected point on the right side of the model and move the point approximately 6 grid units down and 2 grid units to the right.



14) Press the **spacebar** on the keyboard to deactivate the **Move** tool.

15) LMB click in the empty area under the **tool groupings** to deselect the current point selection.

16) RMB click-drag to select the following points.

17) Select the **Move** tool, in the **Top** view place your mouse over the selected point on the right side of the model and LMB click-drag up 4 grid units and 1 grid unit to the right.



18) Press the **spacebar** to deactivate the **Move** tool.

19) LMB click in the empty area under the **tool groupings** to deselect all points.

20) In the **Top** view, RMB click-drag to marquee select the bottom most tail point on the right side of the model.

21) Activate the **Move** tool. In the **Top** view, place your mouse over the selected point on the right side of the model and LMB click-drag down 2 grid units and 1 grid unit to the left near the center of the grid. Place the two points just beside each other.
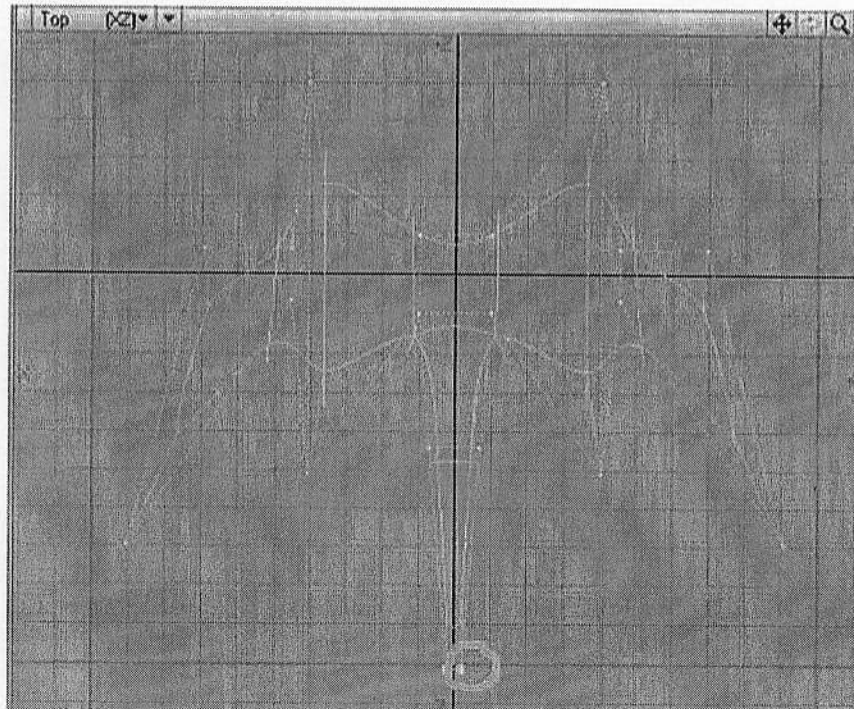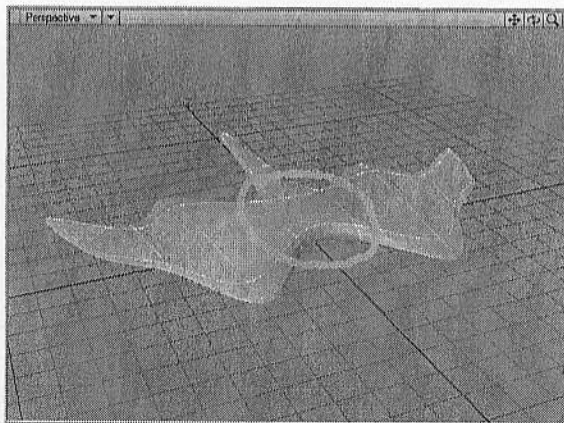
22) Deactivate the **Move** tool by pressing the spacebar, and clear the current point selection.

23) At the bottom left area of the interface, make sure you are in **Polygon** selection mode.



24) In the **Perspective View**, rotate the view so you are looking at the front of the Dragon.
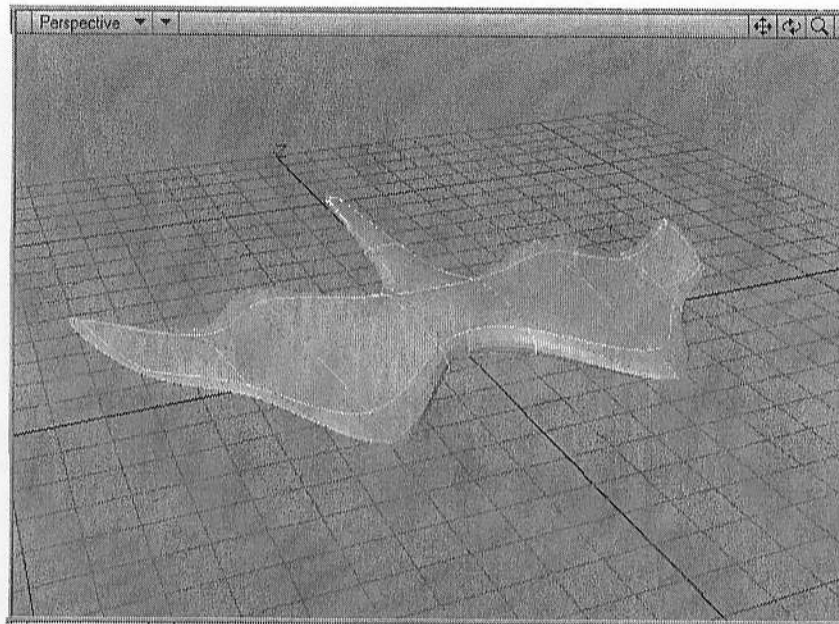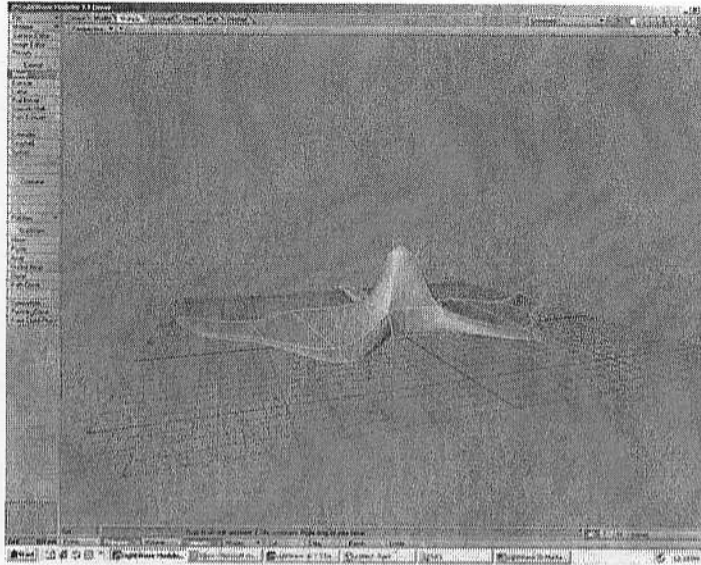


25) **LMB** single-click to select the top-middle face of the Dragon.

26) Select the **Multiply** tab at the top of the interface, select the **Bevel** tool under the **Extend** tool grouping.

27) In the **Right View**, place your mouse in the center of the Dragon model and **LMB** click-drag upward 2 grid units and slightly to the left. Use the following illustration as a reference.



28) **RMB** single-click once to begin another **Bevel** operation. Place your mouse at the center of the model in the Right View and LMB click-drag upward 2 grid units.
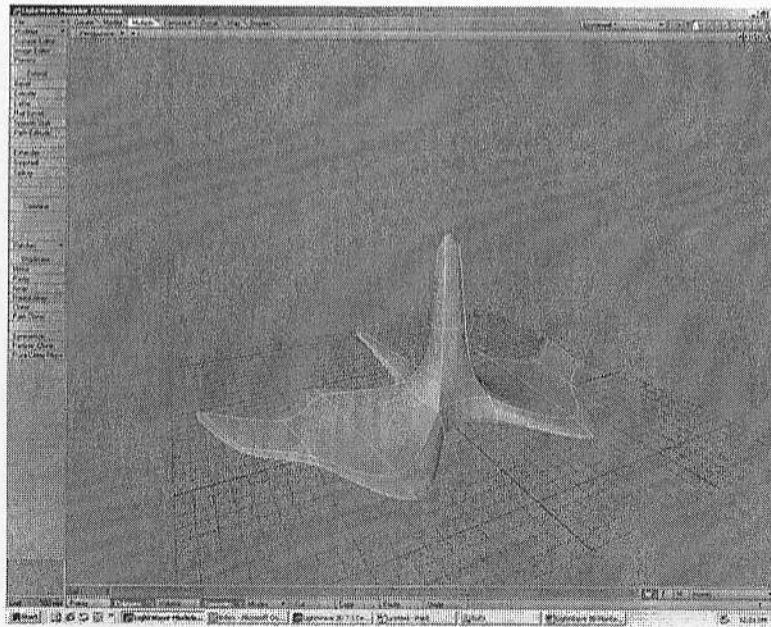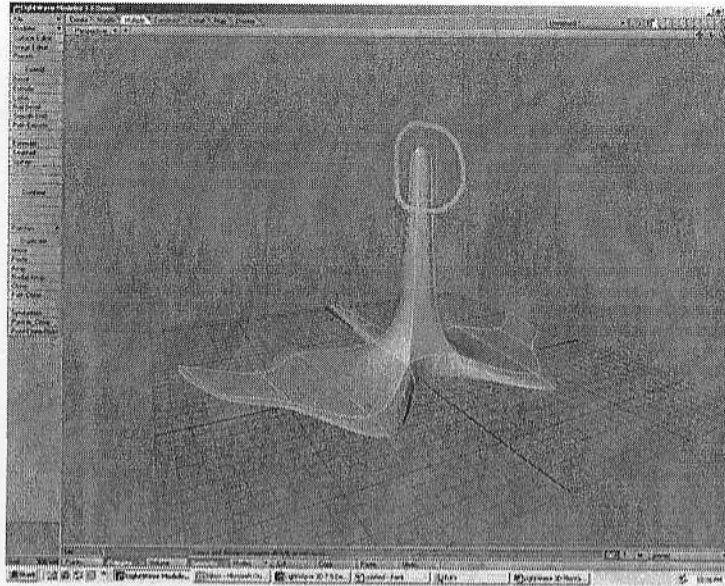
29) RMB single-click to start another Bevel operation. Place your mouse in the center of the Right View and LMB click-drag upward 1 grid unit.
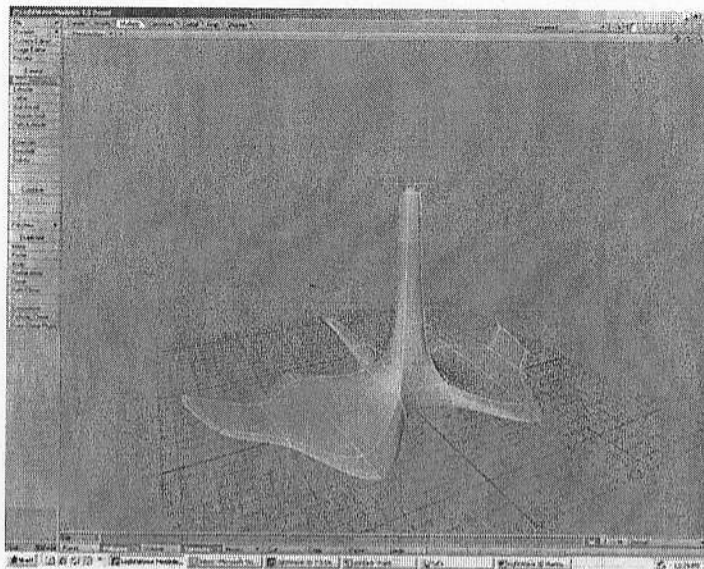


30) Press the **Spacebar** to deactivate the Bevel tool. **LMB** single-click in the empty area under the tool groupings to deselect the current **Polygon** selection.
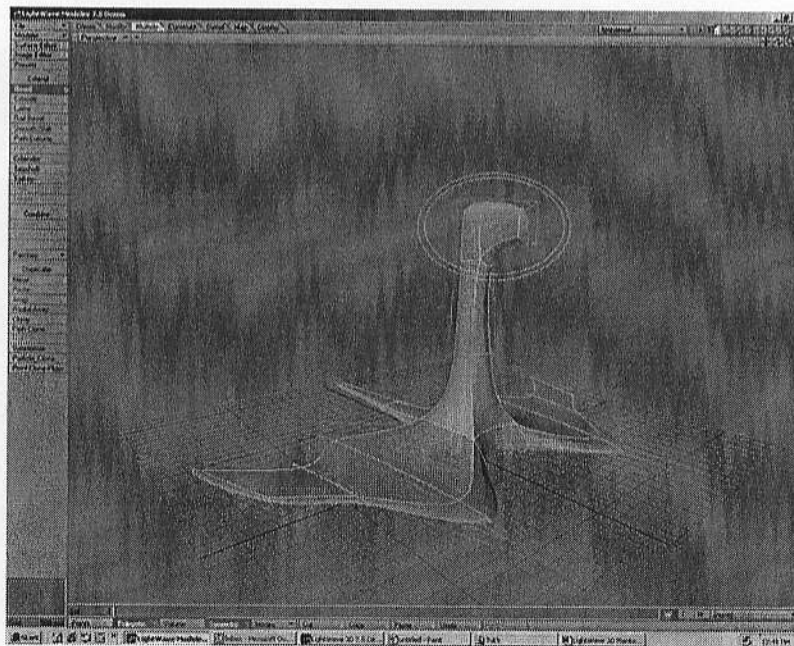
Click Here
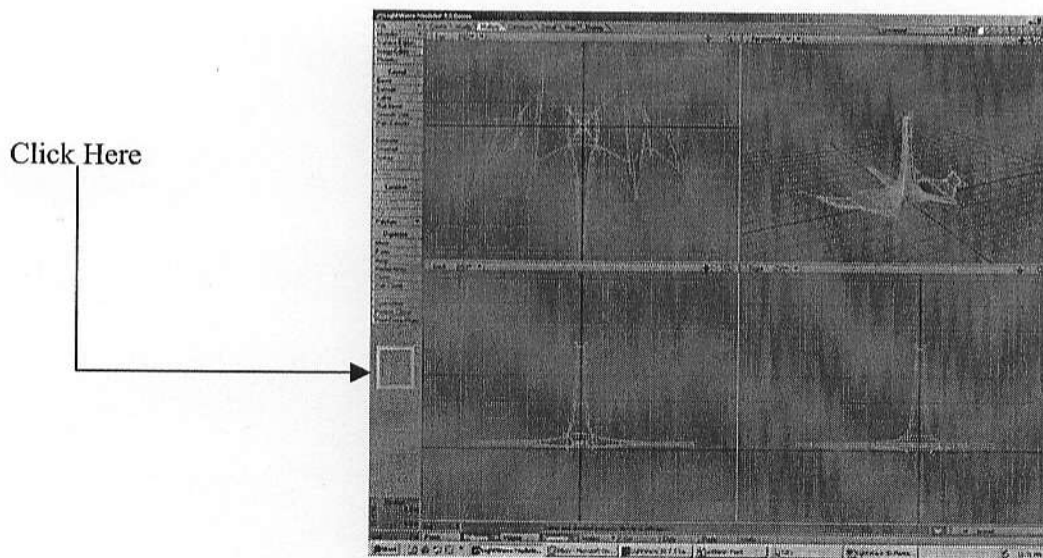
31) In the **Perspective View**, place your mouse over the top-front face and **LMB** single-click on it to select it.



32) Select the **Bevel** tool at the upper left area of the tool groupings.

33) Place your mouse in the center of the model in the **Right View**. **LMB** click-drag upward 1 grid unit to bevel out the face of the Dragon.
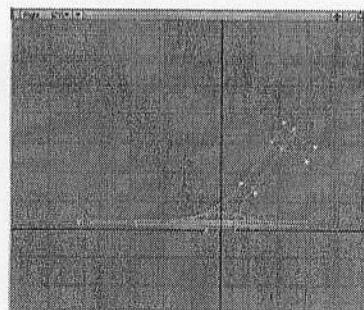
34) Press the **Spacebar** to deactivate the **Bevel** tool.

35) At the bottom left area of the interface, make sure you are now in **Points** selection mode.



36) In the **Right View, RMB** click-drag to marquee-select the points on the neck and head of the model.



37) Make sure you are under the Modify tab at the top area of the interface, select the **Rotate tool** under the Rotate tool grouping at the mid-left area of the interface.

38) Place your mouse in the center of the Right View. LMB click-drag to the left until the neck and head of the model are now on a 45-degree angle to the right.
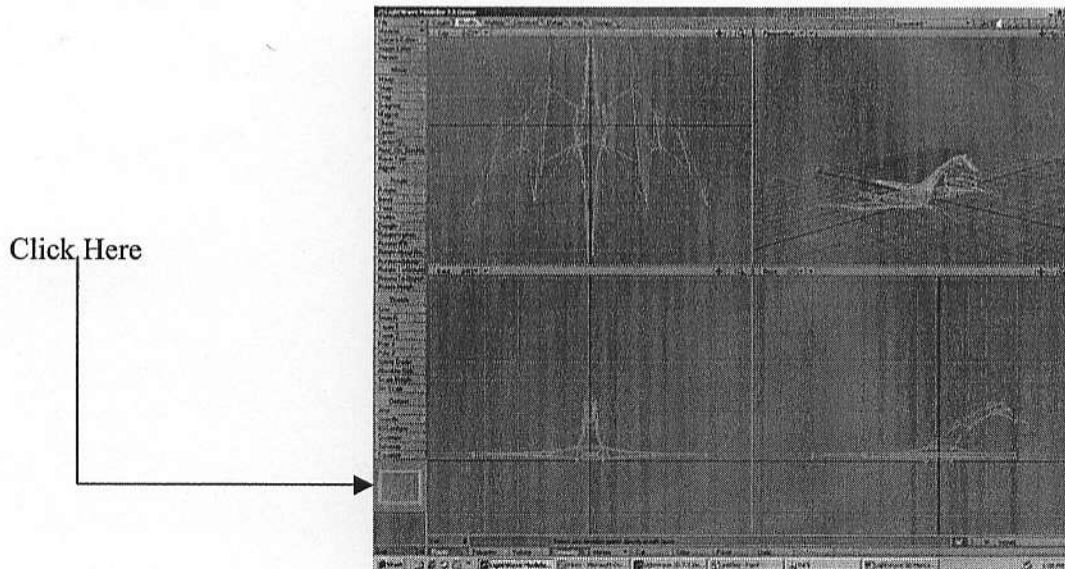
39) Select the **Bend** tool located just under the **Rotate** tool.

40) Place your mouse in the center of the Top View. LMB click-drag slightly until the head and neck of the model are bending down a little in the Right View.
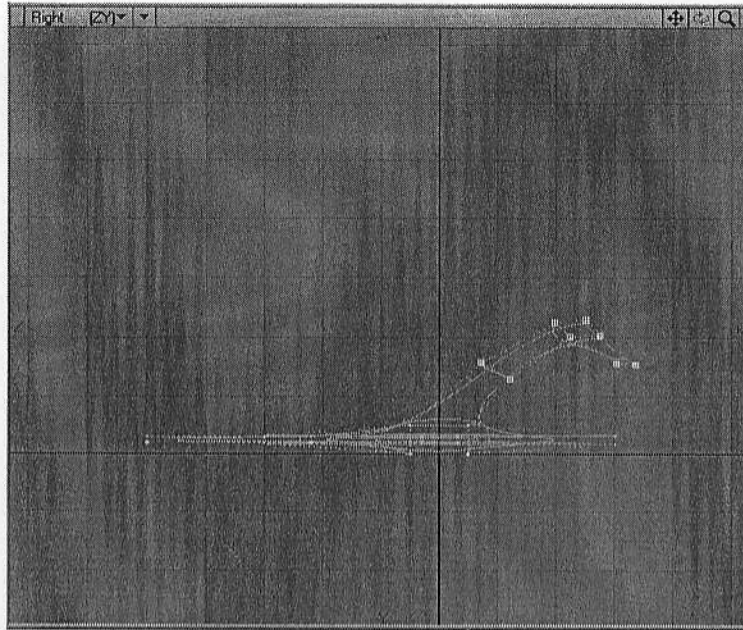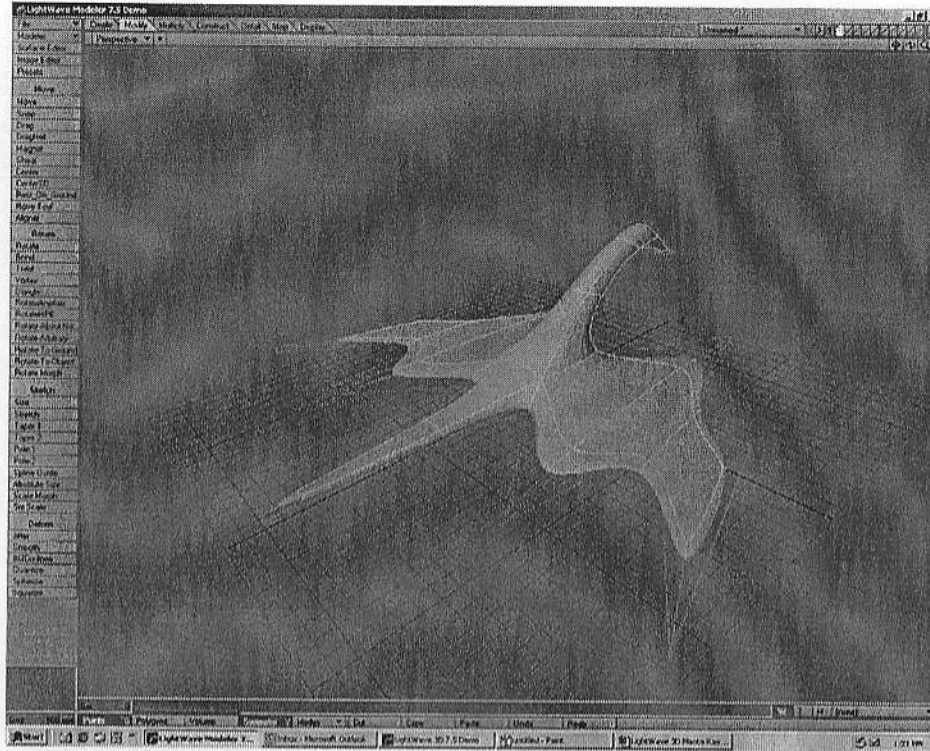


41) Press the Spacebar to deactivate the Bend tool.

42) LMB single-click under the tool groupings to deselect the current Point selection.

Click Here

We are now ready to save the Dragon model and animate it using LightWave Layout.



## *Saving Objects*

43) In the top left area of the interface, LMB click-hold to select the **File** button and navigate your mouse to the **Save Object As** option. Save the object as "Dragon" on your desktop or any directory you desire.

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NOTE: You must save an object in Modeler in order to load it into the counter-part of the interface called LightWave Layout. In this working environment, you can animate, texture, add environmental effect and render your animation. When objects are saved from Modeler, they are post fixed with an .lwo extension. This extension stands for *LightWave Object*

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